REMARKS

In response to the Office Action mailed May 30, 2007, Applicant respectfully requests reconsideration. Claims 1-43 were previously pending in this application. By this amendment, Applicant is canceling claims 22 and 40 without prejudice or disclaimer. Claims 1, 8, 13, 25, 26, 27 and 41 have been amended. New claims 44 and 45 have been added. As a result, claims 1-21, 23-39 and 41-45 are pending for examination with claims 1, 8, 13, 25, 26, and 27 being independent. No new matter has been added.

Independent Claims 1 and 26

The Office Action rejected claims 1, 2 & 26, including independent claims 1 and 26, under 35 U.S.C. § 102(b) purportedly as being anticipated by Shinoda (US 4779036). Applicant respectfully requests reconsideration.

As discussed in previous responses, Shinoda describes that the signal applied to the gate of a thyristor is such that a single halfwave of the signal is sufficient to trigger the thyristor. Shinoda only repeats the triggering pulse in the form of a high frequency signal for the case in which the high frequency signal or the biasing voltage of the thyristor is impaired by spurious pulses (bad "environmental conditions"). Thus, the thyristor usually turns on in response to triggering pulses, but sometimes fails to do so if the thyristor fails to function as intended. Shinoda provides redundant pulses so that if a pulse fails to turn on the switch, another redundant pulse should be able to do so, assuming the bad environmental conditions have subsided.

On Page 3 ¶1, the Office Action states that: "FIG. 8F shows a frequency burst or plurality of halfwaves to provide sufficient energy to start the SCR-type switch." Applicants agree with this statement to the extent that any one of Shinoda's pulses has enough energy to turn on the switch. However, Shinoda makes no mention that these pulses cooperate in any way whatsoever to produce an effect different from what is achieved by a single pulse.

By contrast, claim 1 as amended recites, *inter alia*, applying to a switch gate of the SCR-type switch several periods of an unrectified high frequency voltage in succession, such that an accumulated effect on the SCR-type switch of applying the several periods in succession is to start the SCR-type switch, a power of each halfwave of the several periods being individually insufficient to start the SCR-type switch. Shinoda does not teach or suggest an accumulated

effect on an SCR-type switch of applying several periods of an high frequency voltage in succession. In fact, Shinoda is completely silent as to an "accumulated effect" of several periods on a switch. Instead, Shinoda describes pulses of sufficient amplitude and duration such that any pulse should be sufficient to start the switch, unless erroneous operation occurs. Therefore, claim 1 patentably distinguishes over Shinoda. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 2-7 depend from claim 1 and are therefore patentable for at least the same reasons.

Claim 26 as amended recites, *inter alia*, that the SCR-type switch is turned on in response to an accumulated effect of a plurality of halfwaves of the high-frequency control voltage but is not turned on in response to an effect of an individual one of the plurality of halfwaves. As should be appreciated from the above discussion with respect to claim 1, Shinoda is silent as to an "accumulated effect." Therefore, claim 26 patentably distinguishes over Shinoda. Accordingly, withdrawal of this rejection is respectfully requested.

Independent Claim 25

The Office Action rejected claim 25 under 35 U.S.C. §103(a) purportedly as being anticipated by Nuckolls (3,344,310). Applicant respectfully requests reconsideration.

Nuckolls describes a lamp control circuit for a gas-discharge lamp such as a neon glow lamp. (Col. 2, lines 20-60). FIG. 1 of Nuckolls shows that the control circuit includes an SCR 7 having a gate signal that is provided through a capacitor 56 to prevent undesirable self-triggering of the SCR.

By contrast, claim 25 as amended recites, *inter alia*, providing a high frequency control signal to a gate of the SCR-type switch that controls the SCR-type switch, the high frequency control signal having a frequency of 1 MHz or higher, wherein a duration of a single halfwave of the high frequency control signal is insufficient for the single halfwave to turn on the SCR-type switch. Nuckolls does not teach or suggest that a duration of a single halfwave of the high frequency control signal is insufficient for the single halfwave to turn on the SCR-type switch. Nuckolls is also silent as to a control signal having a frequency of 1 MHz or higher. Furthermore, none of the other references cited in the Office Action teach or suggest these limitations of claim

25. Therefore, claim 25 patentably distinguishes over Nuckolls and the other references cited in the Office Action. Accordingly, withdrawal if this rejection is respectfully requested.

Claims 44 and 45 depend from claim 25 and are therefore patentable for at least the same reasons.

Independent Claims 8 and 13

The Office Action rejected claims 8-11, 13-15 & 17-23, including independent claims 8 and 13, under 35 U.S.C. §103(a) purportedly as being unpatentable over Shinoda (US 4779036) in view of Iwamuro et al. (US 6091087). Applicant respectfully requests reconsideration.

Iwamuro describes an insulated gate thyristor. As illustrated in FIG. 1 of Iwamuro, gate electrode 10 is insulated from the semiconductor substrate by a gate oxide 9. The Office Action states that it would have been obvious to modify Shinoda to include the insulated gate of Iwamuro to reduce power consumption of Shinoda's device. Without agreeing to the propriety of this combination, Applicant respectfully requests reconsideration in view of Applicant's amendments to independent claims 8 and 13.

Claim 8 as amended recites, *inter alia*, said control electrode controlling the SCR-type switch component in response to an unrectified high frequency power supply that supplies several periods of an unrectified high frequency voltage in succession, wherein the SCR-type switch component is configured such that the SCR-type switch component is not turned on in response to an individual one of the several periods, wherein the SCR-type component is configured such that an accumulated effect of applying the several periods in succession causes the SCR-type switch to turn on. As should be appreciated from the above discussion with respect to claim 1, Shinoda does not teach or suggest an "accumulated effect" of applying the several periods in succession. Iwamuro is likewise silent as to this limitation of claim 8. Therefore, claim 8 patentably distinguishes over any combination of Shinoda and Iwamuro. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 9-12 depend from claim 8 and are therefore patentable for at least the same reasons.

Claim 13 as amended recites, *inter alia*, the SCR-type switch is turned on in response to an accumulated effect of the plurality of halfwaves, an individual one of the plurality of halfwaves being of insufficient intensity and/or duration to start the switch by itself. Neither Shinoda or Iwamuro teaches or suggests this limitation of claim 13. Therefore, claim 13 patentably

distinguishes over any combination of Shinoda and Iwamuro. Accordingly, withdrawal of this rejection is respectfully requested. Claims 14-21, 23 and 24 depend from claim 13 and are therefore patentable for at least the same reasons.

Independent Claim 27

The Office Action rejected claims 27-28 & 33-43 under 35 U.S.C. §103(a) purportedly as being unpatentable over Shinoda (US 4779036) in view of Bhagat (US 4630092). Applicant respectfully requests reconsideration.

Bhagat describes an insulated gate-controlled thyristor. The Office Action states that it would have been obvious to modify Shinoda's device with the insulated gate thyristor of Bhagat to provide "rapid turn-off even when anode [sic] voltage stays high." Without agreeing to the propriety of this combination, Applicant respectfully requests reconsideration in view of Applicant's amendment to independent claim 27.

Claim 27 as amended recites, *inter alia*, wherein the SCR-type switch is turned on in response to an accumulated effect of a plurality of halfwaves of the high-frequency control voltage. Neither Shinoda or Bhagat teaches or suggests such an "accumulated effect." Therefore, claim 27 patentably distinguishes over any combination of Shinoda and Bhagat. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 28-39 and 41-43 depend from claim 27 and are therefore patentable for at least the same reasons.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Dated: November 28, 2007

Respectfully submitted,

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